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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Andreas Loew

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EXAMINER

RASHID, DAVID

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/806,734	Applicant(s) LOEW, ANDREAS	
	Examiner DAVID P. RASHID	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Amendments

[1] This office action is responsive to the claim amendment received on April 7, 2008.

Claims 15-20 remain pending.

Claim Rejections - 35 USC § 101

[2] In response to applicant's 35 USC § 101 amendments and remarks received on April 7, 2008, the previous claim 35 USC § 101 rejections are withdrawn.

Claim Rejections - 35 USC § 102

[3] The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

[4] **Claims 15 and 17-20** are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,097,518 (issued Mar. 17, 1992) [*hereinafter* "Scott et al."].

Regarding **claim 15**, *Scott et al.* discloses a method ("ERROR DIFFUSION PIXEL SAVING REDUCTION SCALING" in fig. 4a) for arbitrarily selectable scaling of input video

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(11:34-36) images (fig. 4a, item 410) represented by pixels (“...the source image is broken into pixel groups...” in 14:9-10 wherein the image is a plurality of pixels as shown in fig. 4a) or subpixels arranged line by line (“...horizontally...” in 14:8-11; fig. 4a) and column by column (“...vertically...” in 14:8-11; fig. 4a), wherein the number of lines and columns in the output video images differ from the number of lines and columns of the input video images, the method comprising the steps of:

distributing a number of support points (support points being one specific individual pixel selected in each successive pixel blocks 411, 415, 421, 425 (e.g., support point being either 411_1 , 411_2 , or 411_3 in pixel block 411 using the OR gate 413), corresponding to a number of pixels (fig. 4a, items 441, 442, 443, ...) or subpixels in the output video (11:34-36) image (fig. 4a, item 440), across the lines or columns of the input image at integer pixel or subpixel distances having a minimum variation from one another (absolute minimum variation is preserved if every n-th individual pixel within each pixel block is selected (e.g. $n=1$ such that support points 411_1 , 415_1 , 421_1 , 425_1 ... are selected in each pixel block)), wherein the ratio of the number of support points to the number of pixels or subpixels in a line or column of the input image correspond to the desired scaling factor (An example given in 14:4-16 for the horizontal direction in fig. 4a wherein the desired down-scaling factor is 2.33. Selecting the support points above will preserve an absolute minimum variation such that the desired scaling factor from the sequence 3, 2, 2, 3,... is obtained. Each pixel block must end with the start of a new support point.); and

selecting (fig. 4a, items 413, 417, 427, 423, 433, 439...) or calculating (algorithm in fig. 5) one of a pixel or subpixel value for a pixel (e.g. fig. 4a, item 441) or subpixel in the output video image from pixel (one of 411_1 , 411_2 , or 411_3 from pixel block 411 using OR gate) or

subpixel values in the input image lying between a corresponding support point and a neighbouring support point (e.g. support point 411_1 and neighboring support point 415_1 wherein individual pixel 411_2 or 411_3 is selected using OR gate); wherein the method further comprises:

distributing the support points of two successive lines or columns such that the support points of one line or column have an offset (the pixel distance between support points of two successive lines create an "offset" (e.g., horizontal pixel distance "offset" of 3 pixels between 411_1 and 415_1 , if the support points include 411_1 and 415_1)) with respect to the other line or column, for improving reproduction of fine details in the output video image (*emphasis added*; intended usage); and

outputting the selected or calculated pixel (one of 411_1 , 411_2 , or 411_3 from pixel block 411 using OR gate) or subpixel value to produce the output video image (11:34-36) that can be displayed (*emphasis added*; intended usage).

Regarding **claim 17**, *Scott et al.* discloses further comprising calculating (algorithm in fig. 5) a pixel or subpixel value for a pixel or subpixel in the output video (11:34-36) image (fig. 4a, item 440) from pixel or subpixel values in the input image (fig. 4a, item 410) lying between a corresponding support point and both neighbouring support points (e.g. support point 415_1 with both neighboring support points 411_1 and 421_1 wherein individual pixels 411_3 and 415_2 are selected within their respective pixel blocks (411 and 415) with the OR gate).

Regarding **claim 18**, *Scott et al.* discloses a scaling circuit (fig. 12) for the arbitrarily selectable scaling of video (11:34-36) images (fig. 4a; fig. 5) represented by pixels ("...the source image is broken into pixel groups..." in 14:9-10 wherein the image is a plurality of pixels as shown in fig. 4a) or subpixels arranged line by line ("...horizontally..." in 14:8-11; fig. 4a)

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and column by column (“...vertically...” in 14:8-11; fig. 4a), having a microprocessor (fig. 2, item 220), a program memory (fig. 2, item 215) and a main memory (fig. 2, item 215), and also input means (“microfilm scanner” in 7:60-62; fig. 2, item 270) for scaling circuit is adapted to execute a method as claimed in one of claims 15 to 17.

Regarding **claims 19 and 20**, *Scott et al.* discloses a film scanner with a drive for a control monitor (9:2-15).

Claim Rejections - 35 USC § 103

[5] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[6] **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over *Scott et al.* in view of U.S. Pub. No. 2003/0185451 (filed Jan. 14, 2003) [*hereinafter* “Jung”].

Regarding **claim 16**, while *Scott et al.* discloses the method of claim 15, further comprising the step of determining the values for neighboring pixels in the output image from the pixels between a corresponding support and a neighboring support point (refer to references/arguments cited in claims 15 and 17), *Scott et al.* does not disclose such that they have a maximum difference (though *Scott et al.* discloses selecting a maximum individual pixel value in each pixel block, 48:47-55).

Jung teaches taking the maximum difference (¶ [0033]) between two adjacent blocks (“B_j” and “B_k” in fig. 3) when determining “difference of luminance values h” (¶ [0033]) which would require finding the minimum and maximum of each block.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the pixel blocks of *Scott et al.* to select individual pixels within each pixel block (other than those that are already support points) by determining the maximum difference as taught by *Jung* using the OR gate of *Scott et al.* “...if one wishes to save on calculation resources.”, *Jung*, ¶ [0033].

Conclusion

[7] Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID P. RASHID whose telephone number is (571)270-1578. The examiner can normally be reached Monday - Friday 7:30 - 17:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Vikkram Bali can be reached on (571) 272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

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like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David P. Rashid/
Examiner, Art Unit 2624

David P Rashid
Examiner
Art Unit 26244

/Vikkram Bali/
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